JADECARE Joint action on implementation of digitally enabled integrated person-centred care

JADECARE
Layman's Report

JADECARE is co-funded by
the Third Health Programme of the European Union
under Agreement No. 951442 (HADEA).

BACKGROUND

The ageing of the population with the growing burden of chronic conditions and multimorbidity is steadily increasing the demand for a more extended and efficient care and a more intelligent outcome-based delivery of personalized care in an integrative and coordinated approach. Innovative solutions are needed to deliver efficient integrated person-centred services based on citizen's needs through new technologies, products and organizational changes.

Digital innovation tools and services have the potential and have proven in good practice innovative models of integrated care, to facilitate and support these changes delivering more targeted, personalised and high-quality healthcare to the population.

AIM AND GOALS

JADECARE (Joint Action on implementation of Digitally Enabled integrated person-centred CARE) contributed to innovative, efficient and sustainable health systems providing expertise and sharing good practices to assist the European countries in undertaking health system reforms.

- **Enable the participating national authorities and those beyond the Consortium**, to benefit from efficient solutions in digitally enabled integrated person-centred care developed by the "Early adopters" of the original Good Practices (oGPs)
- **Reinforce the capacity of health authorities to** successfully **address** important aspects of **health system transformation**, in particular the transition to digitally enabled, integrated, person-centred care
- Support the best practice transfer from the systems of the "Early adopters" to the ones of the "Next adopters"

ORIGINAL GOOD PRACTICES

In order to achieve these goals four original Good Practices support participating regions of Member States to transfer the successful practices and generated knowledge into their healthcare systems.

- **The Basque Health Strategy in Ageing and Chronicity: Integrated Care (Basque Country)** intends to improve health and quality of life of the population, enhance the health system quality, efficiency and sustainability and the collaboration with Social services and the Community. The approach focuses on risk stratification, digitally-enabled integrated care and patient/ citizen empowerment, by means of new organizational models, professional roles, pathways and processes and digital tools and analytics.

- **The Catalan Open Innovation Hub on ICT-Supported Integrated Care Services for Chronic Patient (Catalonia)** is a network of entities that promotes synergies among relevant stakeholders of the health and social care system. It places the focus on people and guarantees the healthcare continuum with support of digital tools, complementing the individual approach with a population-based perspective.

- **The OptiMedis population-based integrated care model (Germany)** targets simultaneously better population health, an improved patient experience of care including increased service quality and higher patient satisfaction and reduced per capita costs of health care by increasing system efficiency.

- **The Digital Roadmap towards an integrated health care sector (Region of South Denmark)** consists of the SAM:BO agreement connecting the sectors digitally supplemented by a number of projects in the area of digitally enabled integrated care.

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SLOVENIA
National Institute of Public Health
AE: ZZZS

CZECH REPUBLIC
Ministry of Health of the Czech Republic
AE:UHO

DENMARK
North Denmark Region
AE: RSD

GERMANY
Ministry for Labor, Health and Social Affairs, Family and Integration Hamburg
AE: LGL, ZTG

UNITED KINGDOM
Health and Social Care Board (HSCB) Northern Ireland

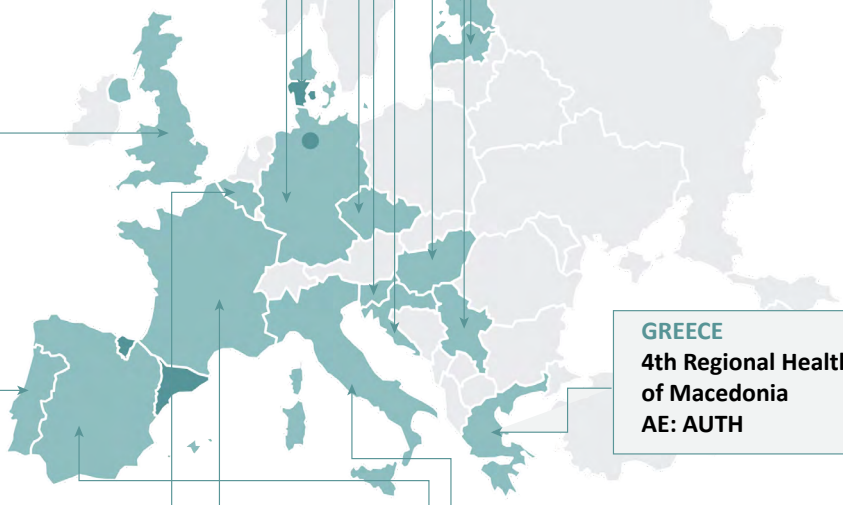
CROATIA
Croatian Institute of Public Health
AE: CHIF

HUNGARY
National Healthcare Service Center
AE: SU, JFDPK

ESTONIA
Estonian Ministry of Social Affairs
AE: VH

LATVIA
National Health Service, Republic of Latvia
AE: CCUH

SERBIA
Ministry of Health of the Republic of Serbia



GREECE
4th Regional Health Authority of Macedonia
AE: AUTH

Original Good Practice

Next Adopter

BELGIUM
Department for Self-determined Living of the German-speaking Community of Belgium

FRANCE
Eurometropole de Strasbourg (Optimedis as subcontracted)

PORTUGAL
Central Administration of The Health System
AE: ENSP/NOVA, SPMS

ITALY
National Agency for Regional Health-care Services
AE: ASL NA2, LOMBARDIA, ARS TOSCANA, USL UMBRIA I, MARCHE, PROMIS, MoH

SPAIN
Kronikgune Institute for Health Servic-es Research
AE: CSCFA, SCS, SACYL, SMS, AQUAS, IDIBAPS, FPS, IDIVAL, FFIS

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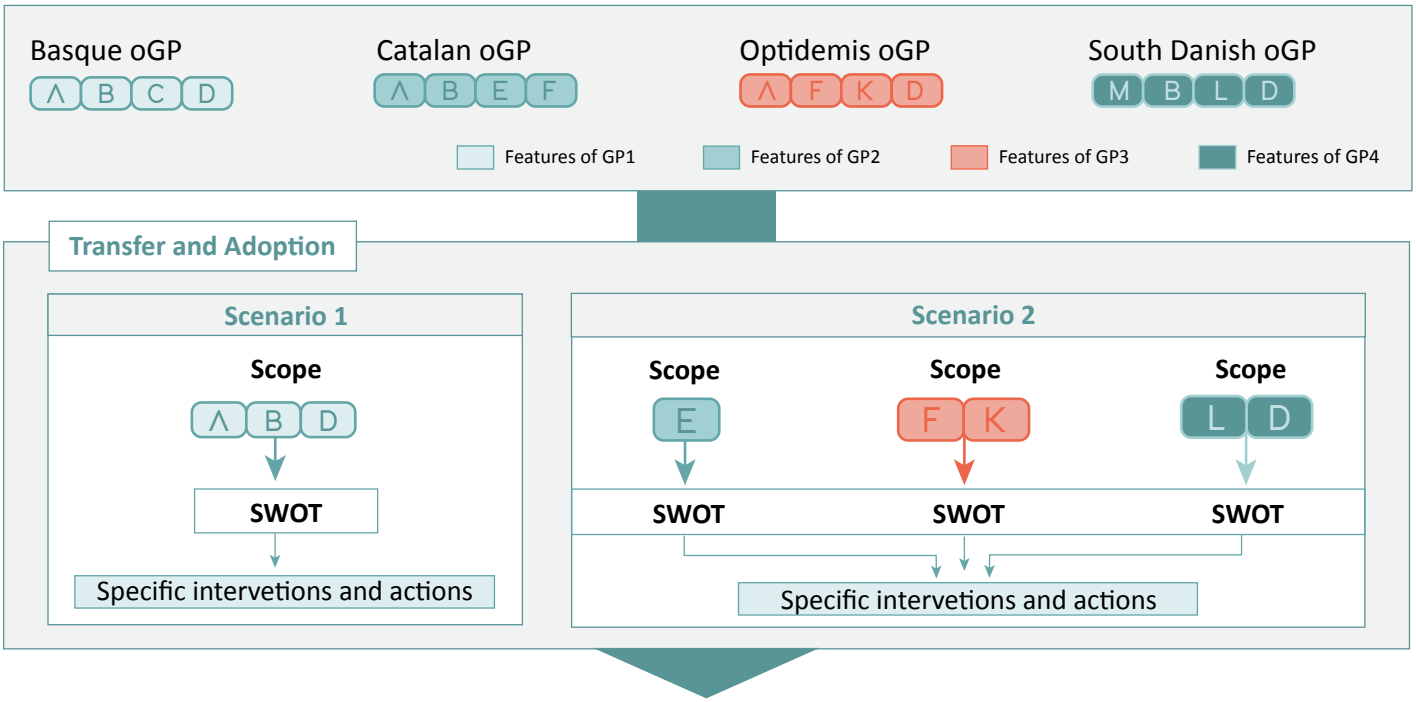
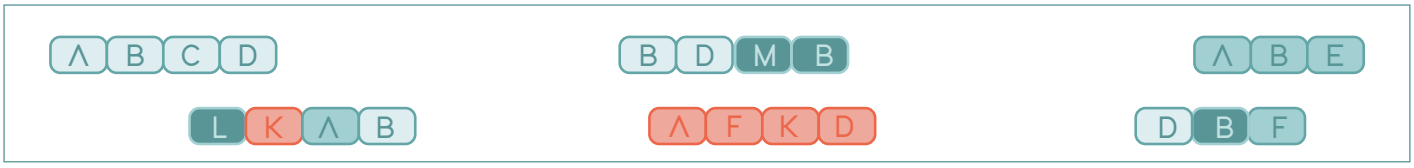
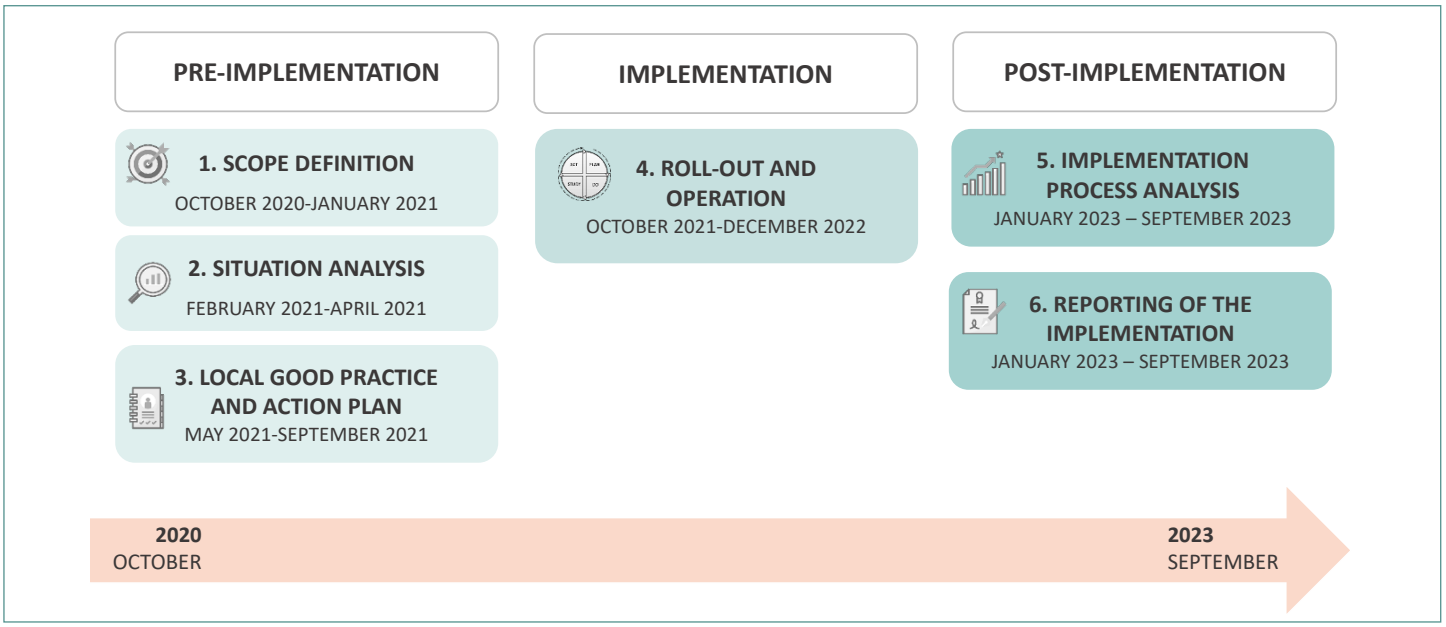
ORIGINAL GOOD PRACTICES: EARLY ADOPTER



LOCAL GOOD PRACTICE: NEXT ADOPTER



IMPLEMENTATION STRATEGY



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JADECARE Joint action on implementation of digitally enabled integrated person-centred care

WP5 TRANSFER OF THE BASQUE INTEGRATED CARE ORIGINAL GOOD PRACTICE

Eight Next Adopters of seven EU countries have worked in the transfer of the Basque Good Practice in JADECARE. Six out of the eight NAs of the Basque Good Practice transferred elements of integrated care, half of them transferred elements of risk stratification and four transferred patient empowerment related features.

North Denmark Region (RND)

Strategic Use of Data in Steno Diabetes Center NorthDemark (SDCN) in the Region of North Denmark (RND)

University Hospital Olomouc (UHO)

Tele-Psychiatry\psychology online, nline management of the psychological and behavioural disorders and Online access to documentation (awareness of medication and medical treatment process)

Ministry of Health of the Republic of Serbia (MoHRS)

Improvement in integration of health information system; and patient empowerment

Croatian Institute of Public Health (CIPH)

Croatian approach on an Integrated Healthcare Sector: New media use in GP-patient communication and disease management materials with the Digital Health Centre

United Local Health Authority (USL UMBRIA 1)

Integrated management of heart failure patients in the "Media Valle del Tevere" district

Regional Health Agency Tuscany (ARS Tuscany)

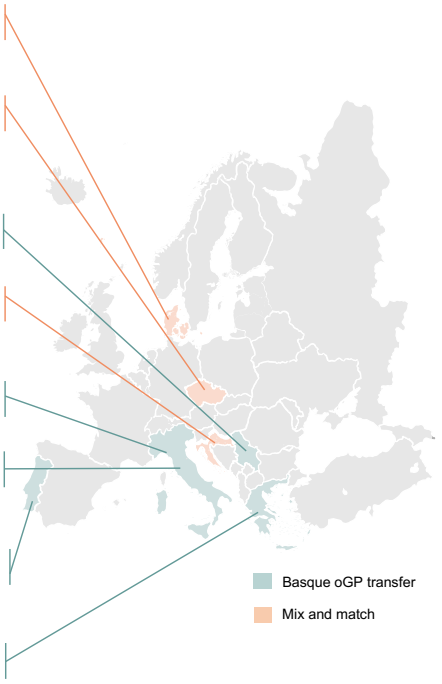
" Piana di Lucca" District Zone's approach to taking care of complex patients by integrating hospital and primary care

Central Administration of the Health System Portugal (ACSS)

Implementation of population risk stratification in Portugal and improvement of continuity of care

Aristotle University of Thessaloniki (AUTH)

Greece's approach on patient classification and patient empowerment



The five Next Adopters transferring features only of the Basque Good Practice achieved the following results:

- The intervention of the **Ministry of Health of the Republic of Serbia (Serbia)** achieved to integrate the module of E-health record with local information system, to train the health staff on its access and use, to integrate the module for e-consultations with local information systems, being accomplished in the field of diabetes in 5 institutions. Risk assessment on personal data protection was accomplished, a mobile E-health application released and contents relevant for patient empowerment through the E-health portal were extended.

- **United Local Health Authority Umbria (Italy)** succeeded in improvement of communication between professionals and the fast track for patient bookings by creating a direct channel between the general practitioner and the hospital cardiologist, and trained the professionals on the empowerment techniques for heart failure patients.

- **Regional Health Agency Tuscany (Italy)** developed a care model, based on improving communication between professionals and on overcoming the fragmentation of care, that provides the Region with an integration between territorial and hospital health services and that is used to improve the pathway for the management and care of complex patients. It starts to spread into five implementation sites.

- **Central Administration of the Health System of Portugal (Portugal)** took a solid step forward moving to a population-based approach based on risk stratification and risk adjusted financing, increase of access and quality of care, the development of future care pathways including patient perspectives, as well asworking on the sustainability of the system.

- **Aristotle University of Thessaloniki (Greece)** developed a mobile application addressed to patients, containing Virtual Patient scenarios for symptoms management and a virtual reality application addressed to Healthcare Professionals with the aim of enhancing empathy through interactive scenarios. Moreover, they developed self-implemented algorithms for risk classification. AUTH have developed policy recommendations on the use of health data that will be disseminated among policy makers in Greece.

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WP6 TRANSFER OF THE CATALAN DIGITALLY SUPPORTED INTEGRATED CARE SERVICES ORIGINAL GOOD PRACTICE

The Catalan oGP has been transferred to five NAs of three European countries/regions. One additional NA (UHO) followed the Catalan oGP during the pre implementation period but did not implement, although future collaborations are in the planning.

Viljandi Hospital (VH)

An initiative to generate a predictive model to strengthen population health management and provide better-tailored services for multimorbidity risk group patients in Estonia

University Hospital Olomouc (UHO)

Tele-Psychiatry\psychology online, Online management of the psychological and behavioural disorders and Online access to documentation (awareness of medication and medical treatment process)

Jahn Ferenc South-Pest Hospital and Clinic (JFDPK)

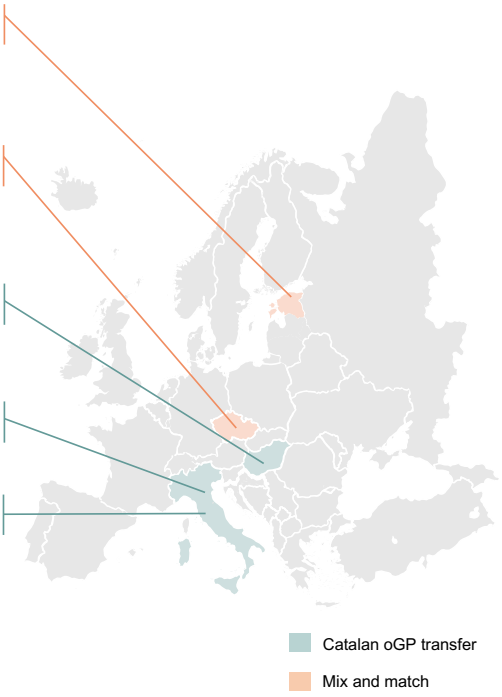
Complex care and rehabilitation of multimorbid patients with type 2 diabetes who undergo minor amputation to prevent lower extremity loss

Marche Region (MARCHE)

A stratification tool for the effective management of chronic diseases in the Marche region

ASL Napoli 2 Nord (ASL NA2)

The management of protected hospital-territory discharges of fragile people, supported by digital tools



The three Next Adopters transferring features only of the Catalan Good Practice achieved the following results:

- **Marche Region (Italy)** applied the risk stratification module established by the Catalan oGP in the Marche context, achieved additional knowledge on regional Health Administrative Databases, developed a Semi-automated procedure for data elaboration, defined structure and content of a dashboard to visualize the results of stratification and health indicators, and to receive Information on the healthcare status of the citizens and use of services/costs by level of complexity and morbidity group.

- **ASL Napoli 2 Nord (Italy)** implemented a new protocol for enhanced home based management of frail patients and transitional care after hospital discharges of frail people, integrated a technological platform for access by social services operators in the municipalities adhering to the ASL Napoli2 Nord, and implemented interoperability with hospital information systems.

- **Jahn Ferenc South-Pest Hospital and Clinic (Hungary)** achieved a Local pilot good practice implementation and evidence based strategy for the decision makers for nationwide implementation, fruitful negotiations with the decision makers to put the diabetes foot prevention to the GP indicator system, extended digitally supported care including patient pathways, established care teams and collaboration between different stakeholders (decision makers, healthcare providers, social and mental sector) and national department of primary care and district community of GPs-hospital. They developed a 2 steps educational program with Hospital professionals educating the district GP's and nurses, as well as Diabetes educational materials given to patients according to the Catalan Good Practice.

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WP7 TRANSFER OF THE OPTIMEDIS MODEL ORIGINAL GOOD PRACTICE

The OptiMedis oGP has been transferred to five Next Adopters of five European regions. Three of them transfer core features only of the OptiMedis oGP, two of them adopted a mix and match approach and transferred features of other good practices of JADECARE.

Viljandi Hospital (VH)

An initiative to generate a predictive model to strengthen population health management and provide better-tailored services for multimorbidity risk group patients in Estonia

North Denmark Region (RND)

Strategic Use of Data in Steno Diabetes Center NorthDemark (SDCN) in the Region of North Denmark (RND)

German speaking community in Belgium – Dienststelle für selbstbestimmtes Leben (DSL)

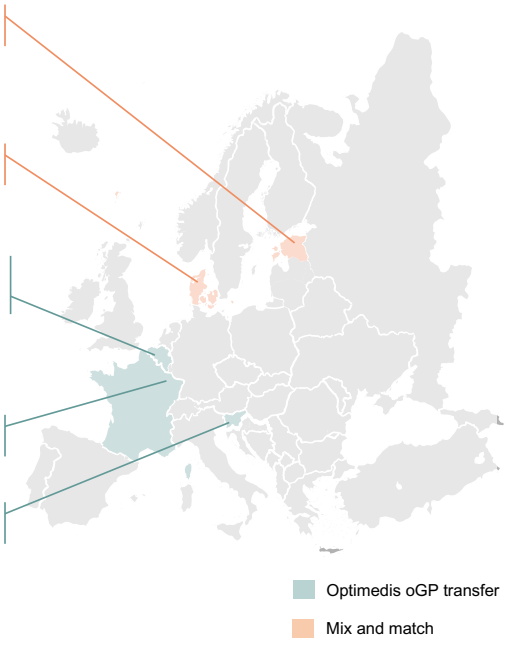
Establish a population based regional integrated care system in the German speaking Community of Belgium based on the OptiMedis model and the Quadruple AIM whilst considering the regional specificities of the German speaking Community.

Eurometropole of Strasbourg (EUSTRAS)

Implement population based integrated care in 3 city quarters of Strasbourg

Health Insurance Institute of Slovenia (ZZZS)

Improvement in integration of health information system; and patient Empowerment in nephrology



The three Next Adopters transferring features only of the OptiMedis Good Practice achieved the following results:

- **The German Speaking Community in Belgium – Diesntstelle für selbstbestimmtes Leben (Belgium)** assessments due to JADECARE suggested a reorientation of care towards a Population Health Management (PHM) and Value based care approach. The NA prepared the ground for policy dialogue.

- **Eurometropole of Strarbourg (France)** analysed the distribution of major chronic diseases and related health care professionals. They identified high-risk areas and used routine data to evaluate impact of sports on prescription program on health care costs. As a result, they found out that active participation in sports on prescription programs reduces health care cost, compared to general population data and that chronic care patients require integrated care pathways bridging different levels of care, as well as that pooled patient data across health care and social sectors remain complex.

- Together with medical experts (nephrology and primary care specialists) **the Health Insurance Institute of Slovenia (Slovenia**) set up new clinical pathways, set up criteria for preventive screening, presented and got consensus about it in professional circles, prepared and distributed educational materials for patient empowerment (https://zadobroledvic.si/knjizice/), prepared a list of additional services (which enables payment of services for integrated care – educational services) and a payment model that incorporates new methods and encourages integrated treatment of patients.

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WP8 TRANSFER OF THE SOUTH DANISH ROADMAP TOWARDS INTEGRATED CARE ORIGINAL GOOD PRACTICE

The Region of Southern Denmark (RSD) good practice has been transferred to eight Next Adopters in five European regions. Six of them transfer core features only of the RSD, and two of them adopted a mix and match approach transferring features of other good practices of JADECARE.

Development of digital eligible ecosystem for children' s healthcare as national level pilot project

University Hospital Olomouc (UHO)

Tele-Psychiatry\psychology online, Online management of the psychological and behavioural disorders and Online access to documentation (awareness of medication and medical treatment process)

Croatian Institute of Public Health (CIPH)

Croatian approach on an Integrated Healthcare Sector: New media use in GP-patient communication and disease management materials with the Digital Health Centre

Lombardy Region (RL)

Lombardy Digital Roadmap towards an Integrated Health Care Sector

Castilla y Leon Regional Health Service (SACYL)

Improving communication between levels of care and Digitally facilitated healthcare

Cantabrian Health Service (SCS) and Valdecilla Biomedical Research Institute (IDIVAL)

Strategy for the digitization of health services in Cantabria

Murcian Health Service (SMS) and The Foundation for Health Training and Research of the Region of Murcia

Developing a tele-rehabilitation service in Murcia

Regional Ministry of Health and Consumers Affairs of Andalusia (CSCJA) and Andalusian Public Foundation Progress and Health (FPS)

Improving healthcare at home for complex chronic patients, including proactive follow-up, in Andalusia

The six Next Adopters transferring features only from the RSD Good Practice achieved the following results:

- **Regional Ministry of Health and Consumers Affairs of Andalusia and Andalusian Public Foundation Progress and Health (Spain):** The focus of the JADECARE implementation in Andalusia was to improve healthcare at home for these patients based on the TeleCOPD component from Denmark. They developed a Centralised System for Proactive Follow-up that gathers information from homecare professionals attending to complex chronic patients and integrates it within the corporate IT system. This allows for proactive and remote monitoring, early identification of warning signs, adaptation of prescriptions, and support to caregivers, ultimately enhancing patient quality of life.

- **Murcian Health Service and The Foundation for Health Training and Research of the Region of Murcia (Spain)** developed treatment protocols, defined pathologies, elaborated video scripts, recorded and reviewed videos, defined pain assessment scales based on pathologies, deve-loped a Platform: Patient´s Circle (including the patients) and interoperability of the ICT area with health records in primary and specialised health care, training sessions for professionals and patients, a Satisfaction survey with evaluation of results.

- **Cantabrian Health Service and Valdecilla Biomedical Research Institute (Spain)** developed a video Rehabilitation Program that was found very satisfying by 93 % of patients, invented a Cantabrian School of Health showcasing educative videos on diverse aspects, such as, early detection of celiac disease, cardiorespiratory arrest, choking and seizure protocols, mouth/teeth hygiene, physical activity, healthy eating and macular degeneration etc. and a Geriatric Tele-psychiatry online intervention.

- **Castilla y Leon Regional Health Service (Spain)** established and scaled up the Teleder-matology and Telepresence inventions, trained derma-tologists and primary care professionals reducing waiting time for dermatology consultation by 35 days. Telepresence equipment was trained to internal medicine doctors, reaching now already 40 % of health centers.

- **Childrens University Hospital (Latvia)** could further their digital eligible innovation ecosystem for children's healthcare consisting of children's health portal, patient portal, portal for professio-nals. Protocols on the introduction of telemedicine and digital services in Latvia cold be advanced.

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MIX AND MATCH TYPE TRANSFER

Viljandi Hospital (VH)

An initiative to generate a predictive model to strengthen population health management and provide better-tailored services for multimorbidity risk group patients in Estonia

North Denmark Region (RND)

Strategic Use of Data in Steno Diabetes Center NorthDemark (SDCN) in the Region of North Denmark (RND)

University Hospital Olomouc (UHO)

Tele-Psychiatry\psychology online, Online management of the psychological and behavioural disorders and Online access to documentation (awareness of medication and medical treatment process)

Croatian Institute of Public Health (CIPH)

Croatian approach on an Integrated Healthcare Sector: New media use in GP-patient communication and disease management materials with the Digital Health Centre

The four Next Adopters transferring features from more than one original Good Practice achieved the following results:

- JADECAREs work formed the basis for **North Denmark Region (Denmark)** to be able to work more strategically with data in the area of diabetes in the future, building on experiences, networks and knowledge gained through JADECARE, such as dashboards for risk stratification on patient absences. RND mixed and matched core features of the Basque and the Optimedis Good Practices.

- **Croatian Institute of Public Health (Croatia)**, demonstrated an advancement of digital transformation of their healthcare system regarding an improvement of digital communication between healthcare professionals and patients. By mixing the methodology of the Basque Good Practice with the Region of South Denmark Good Practice. They promoted the central e-health portal CEZIH and a health-educational webpage by means of a co-creation process with patients, aiming to increase health outcomes, empower the patients in disease management and reunite primary and specialized care.

- **Viljandi Hospital (Estonia)** developed a risk stratification model and case finding algorithms and use them locally, included their use in a national project co -funded by Estonian Health Insurance Fund for the years 2022-2025, and make data for risk stratification algorithms from state insurance fund available in an appropriate format. They also developed a regional accountable care organization framework and mapped primary physicianss interests. VH mixed and matched core features of the Catalan and the Optimedis Good Practices.

- **University Hospital Olomouc (Czech Republik)** introduced as a result of the capacities built in JADECARE a video consultation in psychiatry that is in place in 6 out of 7 health insurance companies. The "video consultation code" can be extended to other clinics. This has led to the development of gestational diabetes, teleophthalmology, etc. using a dashboard for documentation sharing, communication, integrated care, etc. UHO mixed and matched core features of the Basque and the Region South Danish oGP.

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CONCLUSIONS ON THE TRANSFER EXPERIENCE IN JADECARE

The project was useful not only for gaining awareness of what to expect when some innovations are brought to a health-care system, but also because it increased the understanding of the tools needed to achieve a given goal. Appreciation was expressed as to how Next Adopters (NAs) could always ask questions to the original Good Practice holders and get help. It was also observed that JADECARE showed that the sustainability of the project implementation after its end is something achievable, and the project contributed to make this longer-term approach a reality. A NA reported having learned a lot about the possibilities of enhancement and modernisation within his organisation. The Mix and Match format received praise for the opportunity it offers to take elements from different good practices according to NAs' needs and interests, mix them and build a new good practice. It was observed that, if more financial resources were available, it would have been possible to include a wider range of elements from different good practices. This reflects the consideration that there cannot be a "one size fits all" approach, but the approach should rather be tailored according to the NAs situation, needs and goals. The common thread running through all the analyses carried out was the importance of the overall management of the Joint Action in order to complete the whole implementation process. In this sense, success was possible thanks to a strong control component, understood as a set of activities aimed at constantly monitoring the progress of the project, checking that the intermediate results correspond to those expected and, finally, adopting corrective measures in the event

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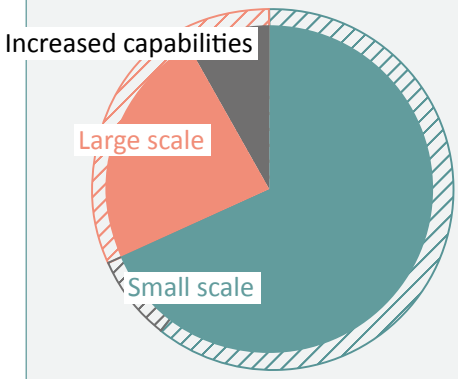
IMPACT OF THE JOINT ACTION JADECARE

Estimated target population: > 4 million people



Ambition of NAs in JADECARE

	before	after
Small scale deployment (piloting)	15	13
Large scale deploymen (system level)	1	5
Increased implementation capabilities	7	1

*Responses from 23 Next Adopters before and 19 Next Adopters after

Next Adopters with changes in digital services

- **4** coordination and communication systems
- **3** citizen empowerment tools, patient reported data and tele-medicine
- **4** data analytics at individual or population level
- **2** digital health system infrastructure and information and process management systems

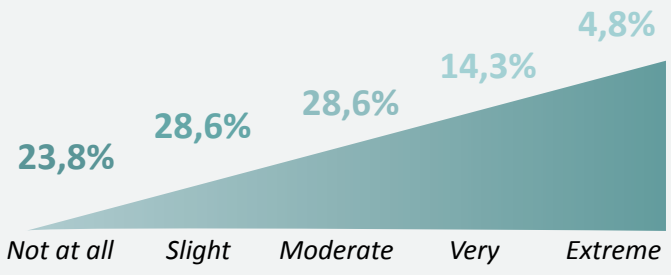
Next Adopters enabling access to newly implemented services and infrastructures *(Population enabled)*

38% *< 100*		18% *no reached*
15% *100- 1000*	10% *1000- 100.000*	19% *>1.00.000*

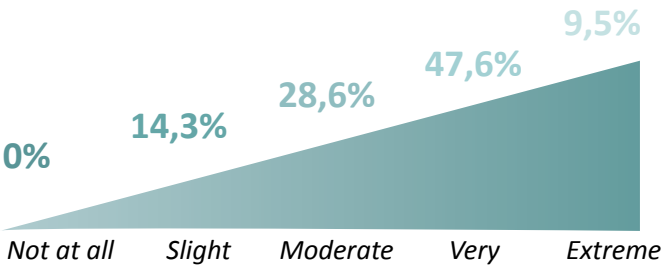
Next Adopters conducting stratification of the population *(Population stratified)*

2	*>1.000.000*	1	*10.000- 100.000*
2	*100.000- 1.000.000*	1	*< 1.000*

Integrated care Next Adopters modifying health policy *(Degree of modification)*



Capacity building Next Adopters improving knowledge and skills of professionals *(Level of improvement)*



**Note: Absolute values and percentages refer to the proportion of total respondents (19 Next Adopters)*

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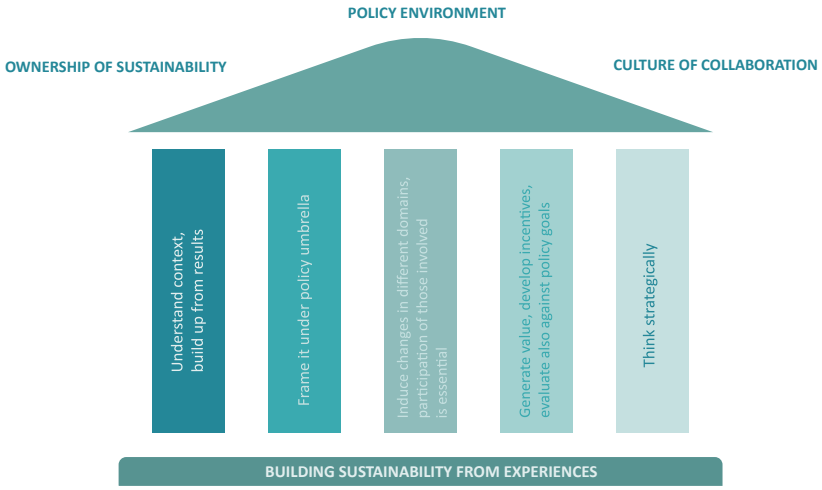
SUSTAINABILITY APPROACH AND RESULTS

Development of JADECARE Sustainability framework based on learnings from past experiences



Development of Next Adopters' practices and sustainability planning in pre- implementation phase

75 activities to increase potential for sustainability included in the Local action plans

Establishment of JADECARE Policy board to support sustainability process at policy level to strenghten EU- added value of JADECARE

22 Policy board members from
19 European countries included in JADECARE Policy board

3 Policy board meetings
3 Policy Dialogues

Development of Next Adopters' Sustainability strategies and Sustainability action plans to support practice fitness and contiunuity

20 Sustainability strategies and Sustainability action plans

55 participants at
21 Informed discussions

204 sustainability strategic objectives

104 sustainability actions defined

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DISSEMINATION RESULTS

EVENTS

participation in regional, national and international scientific events

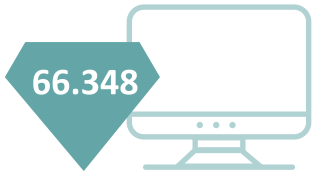
Internal knowledge exchange activities and workshops organised

JADECARE Policy Dialogues and Stakeholder Forums held

WEBSITE & SOCIAL MEDIA

followers on the social media accounts

Youtube videos produced



unique official website visitors

DOCUMENTATION

publications produced

newsletters produced and disseminated

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